Southwest Fisheries Science Center
Fourth Quarter Report - FY 2002
For the period July 1–September 30, 2002

Submitted by: John Hunter, Division Director, Fisheries Resources Division

Title of Accomplishment or Milestone: Produce manuscript on MOCNESS-10 prerecruit survey.

Current Status: Deferred; progress recently resumed.

Background Information: Year to year differences in recruitment generally are thought to reflect interannual variability in survival during early life history stages of fishes. In central California estimates of pelagic juvenile rockfish abundance have been shown to be correlated with year class strength. The abundance of planktonic rockfish larvae also has been used as a fishery-independent indicator of population trends, but in southern California the utility of a late larval/pelagic juvenile index, possibly a more sensitive indicator than early larval abundance, has not been assessed. Micronekton surveys of the Southern California Bight were conducted in early summer, 2000 and 2001, to address this question.

Purpose of Activity: To determine the feasibility of an abundance index of late larval/pelagic juvenile rockfishes as a fishery-independent indicator of population trends. Ancillary goals were to obtain vertical distribution and population genetics data for the rockfishes, and to obtain abundance and distribution data for late larval/pelagic juvenile stages of other fishery species such as Pacific sardine, thornyhead, jack mackerel, and market squid.

Description of Accomplishment and Significant Results: Most rockfishes collected were late larval stage; other fishes were late larvae, juveniles, and in some cases adults. Most fish were collected from the upper100m of the water column, primarily in the warmer waters of the southern Bight. Market squid paralarvae were collected primarily from the upper 50m in the vicinity of the northern Channel Islands spawning grounds. The rockfish distribution and genetics data are utilized in a separate study, as part of a PhD dissertation (C. Taylor, Scripps Institution of Oceanography).

Significance of Accomplishment: The MOCNESS-10 appears to be an effective sampler for determining the abundance and areal and vertical distributions of late larval and pelagic juvenile fishes in the Southern California Bight.

Problems: It was necessary to defer completion of data analysis and preparation of the manuscript so that other, more pressing tasks could be completed.

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